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EXPANDED SCIENTIFIC CONFERENCE ON SANITARY  
PROTECTION OF THE SEACOAST

- USSR -

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An expanded scientific conference on the sanitary protection of the seacoast, convened by the Ukrainian Scientific Research Institute of Communal Hygiene, was held in Kiev on 29-31 May 1958.

Delegates participated from other union republics, including RSFSR, Georgia, Azerbaydzhan, and the Moldavian SSR. Representatives of many scientific research institutes and chairs also attended.

The conference was also attended by representatives of the State Sanitary Inspectorate of the ministries of health USSR and UkSSR, officials of the national sanitary epidemiological center of Azerbaydzhan, doctors from the local and regional sanitary epidemiological centers of a number of coastal cities, and sanitation experts from the inland water sanitary epidemiological centers of Odessa, Baku, and Kiev. In addition, the conference was attended by members of health resort administrations and by officials of the seaside resorts and sanatoria of Yevpatoriya, Yalta, Zhdanov, Osipenko, Slavyansk, and Odessa.

Representatives of a number of building organizations and industrial enterprises also participated in the work of the conference.

An introductory speech opening the conference was delivered by P. D. Leshchenko, Deputy Minister of Health UkSSR, Chief State Sanitary Inspector UkSSR. A. S. Gorodetskiy, Candidate of Medical Sciences (Ukrainian Scientific Research Institute of Communal Hygiene) delivered an appraisal report entitled "Sanitary protection of the seacoast in the region of health resorts and cities as a hygienic problem." He observed that the problem of the sanitary condition of coastal waters, despite its timeliness, was not being given due attention in the science of hygiene or in sanitary practice. The speaker urged that

the conference elaborate a system of measures relating to the sanitary protection of the seacoast in the vicinity of seaside resorts and coastal cities.

An equally important task facing the conference, in the speaker's opinion, was the evaluation of the existing sanitary indicators for sea water pollution and the elaboration of a uniform methodology for this research work.

The total of 26 reports heard by the conference can be broken down by content into several conventional groups:

1. The greatest number of reports (12) concerned questions of the sanitary condition of the coastal waters and measures for its enhancement in the vicinity of the cities of Yalta, Yevpatoriya, Odessa, Sochi, Matsesty, Batumi, Sukhumi, etc.

This group also included reports on the pollution of the Bay of Baku water area by fecal sewage water and a report on the sanitary hygienic inspection of the coastal zone of the Gulf of Finland.

The studies carried on in various cities at various times have utilized the most diverse techniques (sanitary-chemical, bacteriological, helminthological, hydrobiological.) They have revealed significant pollution of coastal waters resulting from the disposal of unpurified or insufficiently purified household fecal waters and industrial sewage waters, as well as from the violation of sanitary regulations by ships at anchor in harbors. The most significant pollution of sea water was noted in the Yalta area; this should be viewed as particularly inadmissible from the standpoint of the All-Union Sanatorium with its health resorts and beaches. As a result of these studies, priority measures have been elaborated, for the protection of sea water from pollution by sewage flow from the Yalta sewers.

The second group of reports dealt with the hydrodynamic regime in the coastal sea zone, i. e., with questions concerning the intermingling, dilution, and self-purification processes of sewage waters in sea water.

Studies carried out in this field have made it possible to formulate recommendations for the correct planning and organization of the disposal of sewage waters in coastal areas.

The third group of reports dealing with the sanitary regime in the zone of health resort towns and beaches was of particular interest. It was observed in a report on the "health sanitary protection zones of seashore climatic health resorts and beaches" (Ukrainian Scientific Research Institute of Health Resort Studies) that health resorts, regions, and zones of sanitary protection have been set up

in the Ukraine during the postwar years; in particular, in 1952 such zones were set up by the UkSSR government for seven Odessa resorts. Strict compliance with sanitary regulations, especially in the first protection zone of sea-shore climatic resorts, is an absolute necessity.

Special attention must be given to the problems of the protection of beaches from pollution by petroleum products and sewage waters. Supervision by the resort patrons themselves of compliance with sanitary regulations must be intensified.

A group of members of the Ukrainian Institute of Communal Hygiene submitted documentation on the sanitary condition of the soil of the southern shore cities in the Crimea. Sanitary-bacteriological and helminthological studies revealed that the soil was in an unsatisfactory condition in a number of seashore cities on the southern coast of the Crimea. These conditions have resulted in the pollution of the coastal sea waters (through surface flow.) To ensure the sanitary protection of the seacoast, measures must also be taken to protect the soil of resort and coastal cities from pollution. A fourth group of reports was devoted to matters relating to the viability and variability tendencies of certain pathogenic microbes in sea water. Interesting data were obtained by K. B. Khant (Odessa Medical Institute) and B. M. Raskin (Bacteriological Laboratory of the Yalta Hospital for Infectious Diseases) on the variability in sea water of microbes of the intestinal typhoid group. It was observed by both authors that sea water has considerable bacteriocidal properties with respect to the types of micro-organisms they had studied; however, such microorganisms are capable of surviving in sea water over a shorter or longer period of time, depending on various conditions. The research conducted by Ye. M. Romashkevich-Dondua (Yalta Institute imeni Sechenov) on the morphological and biological mutations of the Koch bacillus under the influence of sea water is also of theoretical and practical interest. It was found that sea water, under prolonged action, demonstrates high bacteriostatic and lytic properties with respect to tuberculosis microbes. The existence of these properties furnishes substantiation for sea water therapy.

An interesting report was submitted by Docent N. N. Alfimov on the sanitary hydrobiological indicators for sea water pollution. The author recommended certain types of diatom algae as the most sensitive indicators for estimating the degree of purity of sea water. In the author's opinion, it is quite easy to determine these types of algae, and this method is fully applicable to sanitary hygienic

research. N. N. Yeremeyev submitted documentation on sanitary helminthological studies of sea water.

The participants in the conference listened with great interest to Professor V. A. Yakovenko's report on medical oceanography. As the speaker stated, the task of this new scientific discipline should be to eliminate the contact of human beings with polluted sea water. At the same time, the ocean should be enlisted in the service of man's health with a view toward utilizing the curative properties of sea water for the treatment of illnesses and the promotion of human health. In addition, the nutritional resources of sea water should be utilized.

Active debates took place after the reports had been heard. The speakers approved the initiative taken by the Ukrainian Scientific Research Institute of Communal Hygiene in convening the conference. To protect the seacoast from pollution, everyone stressed the need for the earliest possible regulation of the disposal of sewage water into the sea.

It was observed, however, that, on the basis of the work accomplished, it did not yet seem possible to solve the problem of unifying sea water research methodology. Further studies were needed on the elaboration of criteria for evaluating the effectiveness of various indicators.

In conclusion, the conference adopted a resolution deciding: <sup>1</sup>

1. To approve the scientific research work carried out and the measures envisaged for the sanitation of the seacoast in the region of Yalta, Yevpatoriya, Odessa, Zhdanov, Baku, Osipenko, Batumi, and Sukhumi.

2. To call for the elaboration of:

- a) a draft of temporary sanitary regulations for the protection of the seacoast from pollution by household and industrial drainage waters, by ocean vessels, and from other sources of pollution;

- b) a schema and a unified methodology for the sanitary evaluation of sea water pollution.

3. To organize at the Ukrainian Institute of Communal Hygiene a commission for the elaboration of the said documents; this commission will include the chairs of general and communal hygiene of the Odessa Medical Instit-

<sup>1</sup> The basic clauses of the resolution are listed.

ute, the chair of general hygiene of the Lugansk Medical Institute, and practicing sanitary physicians from Yalta and Zhdanov.

4. To direct the commission to prepare a draft of regulations, a schema, and a methodology for sea water research. These reports are to be submitted for examination to the Committee on the Sanitary Protection of Reservoirs of the Main State Sanitary Inspectorate USSR not later than the first quarter of 1959.

5. To direct scientific research institutes and chairs of the corresponding profiles to expand and intensify studies of sea water, conditions governing the disposal of sewage water in the sea, and questions of medical oceanography.

6. To request the Academy of Medical Sciences USSR to ensure the coordination of scientific research work in this field.

7. To publish the deliberations of this conference. This is to be done in view of insufficient elucidation in the literature of the timely issue of the sanitary protection of seacoast zones.

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